

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Proposed Changes in the Commission's	)	
Rules Regarding Human Exposure to	)	ET Docket No. 03-137
Radiofrequency Electromagnetic Fields	)	

To: The Commission

**COMMENTS OF  
SOUTHERN COMMUNICATIONS SERVICES, INC.  
AND SOUTHERN COMPANY SERVICES, INC.**

Pursuant to Section 1.415 of the FCC's Rules, Southern Communications Services, Inc. d/b/a Southern LINC, and Southern Company Services, Inc. (collectively referred to herein as "Southern") hereby submit their Comments in response to the Commission's *Notice of Proposed Rule Making*, FCC 03-132 ("NPRM"), proposing changes to the Commission's Rules on human exposure to radiofrequency ("RF") electromagnetic fields.<sup>1</sup> The Commission has initiated this proceeding to "provide more efficient, practical and consistent application of compliance procedures."<sup>2</sup> Southern appreciates the Commission's initiative in providing further clarification of its requirements for verifying compliance with the RF exposure limits. However, as explained below, a few of the proposals raise additional questions regarding compliance, particularly due to the Commission's proposals to significantly revise its current rules on categorical exclusions.

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<sup>1</sup> The *NPRM* was published in the Federal Register on September 8, 2003, 68 Fed. Reg. 52879

<sup>2</sup> *NPRM* at para. 1.

## **I. Introduction**

Southern LINC and Southern Company Services, Inc. are wholly-owned subsidiaries of Southern Company, which is a registered holding company under the Public Utility Holding Company Act of 1935, as amended. Southern Company, through five electric utility subsidiaries, Alabama Power Company, Georgia Power Company, Gulf Power Company, Mississippi Power Company, and Savannah Electric and Power Company (collectively referred to herein as the "Operating Companies"), provides retail and wholesale electric service throughout a 120,000 square mile service territory in Georgia, most of Alabama and parts of Florida and Mississippi. Southern LINC provides Commercial Mobile Radio Service to business, government and consumer subscribers, as well as serving Southern Company's operating utility companies. Southern Company Services, Inc. provides administrative and other functions, including internal telecommunications services, in support of Southern Company and its Operating Companies.

Southern operates a variety of both licensed and unlicensed radio transmitters and could be affected by any rule changes regarding the manner in which users of RF transmitting devices must verify compliance with the FCC's RF exposure rules. As explained herein, Southern is particularly concerned with the potential for the proposed rules to require a massive engineering review with respect to certain low power fixed transmitters such as Multiple Address Systems licensed under Part 101, bi-directional amplifiers (or "signal boosters") used pursuant to Section 90.219 in the Private Land Mobile Radio Services, and "leaky" coaxial cable or "distributed antenna" systems used to provide in-building coverage for mobile radio networks. These devices are generally

considered to be categorically exempt from routine environmental review under the current rules, but their status under the proposed Rules is unclear. Since the stated purpose of this rulemaking is to streamline the environmental review process and to harmonize the criteria for categorical exclusion applicable to much higher power transmitters, Southern urges the Commission to clarify that these low power transmitters are not subject to individual environmental review.

## **II. Discussion**

### **A. The Commission Should Clarify How Compliance Should Be Verified for Networks of Low Power Fixed Devices**

The Commission proposes to eliminate some apparent inconsistencies in the current rules by which certain fixed transmitters are categorically excluded from routine environmental evaluation. The Commission is now proposing to use separation distances in lieu of height of the transmitting antenna above ground to determine whether routine environmental evaluation will be required. This change could have an enormous impact on the operators of systems employing large numbers of fixed transmitters that were previously categorically excluded from environmental processing. For example, Multiple Address Systems (MAS), operating in the 900 MHz band and licensed under Subpart O of Part 101, are categorically excluded by virtue of Section 1.1307(b)(1) and Table 1 to Section 1.1307. With respect to transmitters licensed under Part 101, the current Rules require routine environmental evaluation of only certain facilities licensed under two subparts of Part 101; *i.e.*, certain facilities in the Local Multipoint Distribution Service (LMDS) under Subpart L of Part 101 and the 24 GHz Service under Subpart G of Part 101.

At paragraph 11 of the *NPRM*, the Commission proposes that routine evaluation would be required for fixed transmitting facilities where the separation distances from publicly accessible areas is less than 3 meters, regardless of operating frequency or power, with the exception of certain very low power devices. Routine evaluation would also be required for facilities where the separation distance from publicly accessible areas is less than 10 meters and the transmitting power is 100 watts ERP or greater for transmitters operating below 1.5 GHz and 200 watts ERP or greater for transmitters operating at 1.5 GHz and above. The Commission is proposing to categorically exclude transmitting facilities if the separation distance to publicly accessible areas is 10 meters or greater, regardless of power or frequency band.

However, the *NPRM* is unclear whether the foregoing requirements would be imposed in every radio service in which fixed transmitters could be deployed, or whether the FCC is proposing to carry forward the categorical exclusions applicable to certain radio services. This confusion is based on paragraph 11 of the *NPRM*, in which the Commission states that these proposed changes would apply to transmitting facilities in the following services:

- Multipoint Distribution Service (Subpart K of Part 21)
- Cellular Radiotelephone Service (Subpart H of Part 22)
- Paging and Radiotelephone Service (Subpart E of Part 22)
- Personal Communications Service (Part 24)
- Wireless Communications Service (Part 24)
- Experimental, Auxiliary, and Special Broadcast and Other Program Distributional Services (Subpart I of Part 74)
- Private Land Mobile Radio Services Paging Operations (Part 90)
- Private Land Mobile Radio Services Specialized Mobile Radio (Part 90)
- Local Multipoint Distribution Service (Subpart L of Part 101)
- 24 GHz Service and Digital Electronic Message Service (Subpart G of Part 101)
- Terrestrial Repeater Stations in the Satellite Digital Audio Radio Service (Part 25)

Even though these are the only radio services identified in the *NPRM* as being affected by the foregoing changes to the categorical exclusions, the text of the proposed rules would appear to subject all Fixed Microwave Services under Part 101 to these new requirements. As the revisions to Table 1 are currently drafted, a Multiple Address System transceiver (or any transmitting facility licensed under Part 101) would be subject to routine environmental evaluation if the separation distance is less than 3 meters and the device did not qualify for the separate exclusion for very low power devices.

By their very nature, MAS remote stations could be located less than 3 meters from accessible areas; for example, on utility distribution poles or street lights. It is not practical to fence off areas around utility distribution poles or street lights, nor is it possible to identify all personnel who may attempt to access a pole for maintenance or installation of other equipment (*e.g.*, telephone or cable television attachments) on the pole. MAS remotes typically operate 50 watts ERP or less and oftentimes in a “polling” mode, meaning the remote is only set to transmit when polled by the associated master station. Alternatively, MAS remotes can be programmed to transmit data at predetermined intervals or on the occurrence of a specific event (*e.g.*, an alarm). For example, each remote in Southern’s MAS network typically transmits only once (in a sub-one-second burst) every six to twelve seconds.

Southern uses these devices to remotely monitor master control banks, meters, and other components crucial to the safe and efficient operation of Southern’s electric transmission and distribution system. MAS forms the essential communications link in Southern’s supervisory control and data acquisition (SCADA) system, providing it with

“eyes and ears” on the status of the electric system and an ability to control certain key components. At present, Southern has deployed approximately 6,500 MAS remotes and anticipates adding even more over time.

Southern therefore urges the Commission to conform the text of Table 1 to the scope of the new rules as explained in the *NPRM*. That is, instead of applying the Table 1 requirements to all “Fixed Microwave Services (Part 101),” Table 1 should be clarified to state: “Local Multipoint Distribution Service (Subpart L of Part 101), and the 24 GHz and Digital Electronic Message Service (Subpart G of Part 101).”

In the alternative, Southern recommends that the Commission amend Section 1.1307(b)(1)(ii) to categorically exclude low power fixed transmitters mounted in such a way that persons would not normally be considered to be very close to them. In lieu of the Commission’s proposed revisions to Section 1.1307(b)(1)(ii), Southern recommends that the exclusion apply “if the transmitter is mounted such that members of the general public would not normally be expected to be within 1 meter from any part of the radiating structure and if the operating power of the transmitter is 50 watts ERP or less for transmitters operating at frequencies at or below 1.5 GHz, or less than 100 watts ERP for frequencies above 1.5 GHz.” It should be noted that these power thresholds are less than those that are used in Section 97.13(c)(1) to categorically exclude amateur radio transmitters.

Southern would also support the Commission’s alternative approach of using a series of power exclusion thresholds for different separation distances.<sup>3</sup> As noted above, however, the exclusion thresholds should be based on power and distance criteria that are realistic in order to avoid the anomalous result of requiring routine environmental

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<sup>3</sup> *NPRM* at para. 15.

evaluation of low power MAS remotes that pose little risk of environmental harm. In the *NPRM*, the FCC notes that its suggested ERP values (1.5 watts and 3 watts) for the categorical exclusion of low power transmitters “are based on conservative calculations for exceeding the FCC’s limits for maximum permissible exposure (MPE) at a distance of 20 cm.”<sup>4</sup> Since the FCC’s MPE limits already incorporate a significant margin of safety based on the scientific literature, it is not necessary for the Commission to add yet an additional margin when defining the categorical exclusion for low power fixed devices.<sup>5</sup> Southern further requests clarification whether time averaging could be considered when evaluating applicability of the exclusion for low power fixed transmitters such that a device with a low duty cycle could be operated at a higher ERP than would be permitted if the device were operated continuously.

#### **B. The FCC Should Clarify How Compliance Would Be Verified for Unique Installations of Fixed Transmitting Devices**

Southern requests clarification of how the proposed rules would apply to certain unique fixed transmitting devices such as bi-directional amplifiers authorized pursuant to Section 90.219 and “leaky” coaxial cable (or “distributed antenna”) systems used to extend mobile radio service into an enclosed area such as a building or tunnel. Although Part 90 licensees are responsible for ensuring that bi-directional amplifiers do not cause harmful interference,<sup>6</sup> in many situations these devices are maintained by a building owner or building tenant.

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<sup>4</sup> *NPRM* at n. 8.

<sup>5</sup> *Second Memorandum Opinion and Order and Notice of Proposed Rulemaking*, ET Docket No. 93-62, 12 FCC Rcd 13494, 13505-06 (1997).

<sup>6</sup> 47 C.F.R. §90.219(f).

Southern believes that these devices should be categorically excluded due to their low power. Bi-directional amplifiers, for example, are limited by Section 90.219 to 5 watts ERP. Similarly, “leaky cable” systems are designed to transmit just enough signal in an enclosed area so that mobile radio service coverage can be maintained within the building or other enclosed area. However, it appears that under the proposed revisions to Table 1 in Section 1.1307, these devices, when used by a Specialized Mobile Radio licensee under Part 90, would be subject to routine environmental evaluation if persons could be located within 3 meters. It also appears that the same devices, if used by other Part 90 licensees, would be categorically excluded. The *NPRM* does not explain this apparent disparity.

Southern therefore requests that the Commission clarify that bi-directional amplifiers authorized under Section 90.219 and “leaky cable” systems used to extend coverage within an enclosed structure are categorically excluded. Alternatively, the power limits proposed for categorical exclusion in Section 1.1307(b)(1)(ii) should be revised upward to clearly encompass bi-directional amplifiers and leaky coaxial cable systems.

### **C. Any Transition Period Should Be Commensurate With the Burdens That Would Be Created by the Rule Changes**

The Commission has proposed a transition period of six months after new rules are adopted before they become effective in order to permit licensees and applicants “to become familiar with any changes to our rules that could require additional routine evaluation for previously excluded transmitters and devices.”<sup>7</sup> Initially, it is unclear

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<sup>7</sup> *NPRM* at para. 49.



whether the Commission is proposing to limit routine evaluations of previously-excluded transmitters to those that are authorized or deployed after the effective date of the new rules, or whether the Commission is also contemplating that a routine evaluation will be conducted at the effective date for all previously-deployed devices. Southern urges the Commission to clarify that after the effective date of the new rules, routine evaluations are only required at the time of license application or deployment, and are not required for devices that were previously licensed and deployed based on categorical exclusion.

If routine evaluations are required for previously-deployed transmitters, it could take much longer than six months for licensees to conduct routine evaluations of all currently-deployed devices that had been categorically excluded. In Southern's case, for example, if the Commission concludes that it will no longer categorically exclude MAS remotes operating at 50 watts ERP or less, Southern may be required to undertake a system-wide review of approximately 6,500 MAS transmitter installations throughout its multi-state operating area. This could potentially be an enormous undertaking.<sup>8</sup>

### **III. Conclusion**

Although the Commission has proposed to amend its rules on exposure to RF radiation to make them more efficient, practical and consistent, the specific proposals intended to ensure consistency across radio services may cause compliance with these same rules to be inefficient and impractical. Southern therefore urges the Commission to clarify that Multiple Address Systems (MAS) operating under Subpart O of Part 101 will continue to be categorically excluded from routine environmental review. Similarly,

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<sup>8</sup> As noted above, it is for this reason that Southern has recommended that the Commission avoid eliminating categorical exclusions for large numbers of devices that, in reality, should pose little risk of exceeding the FCC's already conservative exposure thresholds.

Southern requests clarification that certain unique low power fixed transmitting devices, such as bi-directional amplifiers and leaky coaxial cable antenna systems will continue to be categorically excluded. Finally, Southern recommends that any transition period be sufficient for licensees to come into compliance with any new requirements, with due regard for the number of devices that are newly subject to routine environmental evaluation.

**WHEREFORE, THE PREMISES CONSIDERED,** Southern Communications Services, Inc. and Southern Company Services, Inc. respectfully request the Commission to consider these Comments and proceed in a manner consistent with the views expressed herein.

Respectfully submitted,

Southern Communications Services, Inc.  
and Southern Company Services, Inc.

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